

REMARKS

The Applicant appreciates the Examiner's careful examination of this case. Reconsideration and re-examination are respectfully requested in view of the instant remarks.

With regard to paragraphs 1 – 4 of the Office Action, the objection of added matter is to the wording "a suction chamber positioned between the valve plate and the cylinder head". This wording has been withdrawn and instead it is proposed simply to refer to "a suction side". This wording of "a suction side" is able to be found specifically at page 5 line 4 of the specification as originally filed. The wording of "a suction side" is proposed for claim 16 and the corresponding paragraph beginning at page 2 line 5. The paragraph proposed for page 3 lines 17 – 25 in the Amendment filed 12/20/2004 has been amended such that the wording objected to as added subject matter has been removed. The paragraph as presently proposed for page 3 lines 17 – 25 states that the valve plate 7 is divided by a baffle 10 into an inlet/suction side 12 and a discharge side 14. As noted above, page 5 lines 4 refers to "suction side". Page 3 line 23 of the original disclosure refers to "an inlet side" and page 3 line 24 of the original disclosure refers to a "discharge side". The drawing filed with the amendment dated 12/20/2004 simply shows exactly what was stated in the original disclosure and is believed to be allowable.

With regard to paragraphs 5 and 6 of the Office Action, the Examiner has rejected claims 16-20 as being anticipated by Gyory (US 4,172,696).

The Examiner says that Gyory discloses a valve assembly with a tube 28 connected to the valve plate 18. The Applicant respectfully disagrees with this and notes that Gyory describes the part 28 as a suction plenum 28, see column 2 line 27. Thus Gyory discloses a suction chamber 28 and not a tube 28. The Examiner says in paragraph 6 of the Office Action that a suction chamber is considered inherent to the valve assembly of Gyory and is regarded as the chamber in which the tube 28 is disposed. This interpretation of Gyory does not agree with what is shown and described in Gyory. More specifically, Gyory quite specifically states that the valve assembly has a suction chamber 28. The suction chamber 28 cannot also be a tube 28 and thus it is respectfully submitted that Gyory does not disclose a tube 28. Self-evidently, a tube such as the Applicant's tube 17 is essential to the Applicant's invention.

Thus Gyory does not disclose the Applicant's tube 17 and Gyory does not disclose and does not teach using a tube such as the Applicant's tube 17 to receive a column of fluid to effect substantial dampening of the reed 40. Gyory is not concerned with the Applicant's problem, and Gyory does not show a structure which would solve the Applicant's problem.

With regard to paragraphs 7 and 8 of the Office Action, the Examiner also rejects claims 16 – 20 as being unpatentable over JP 10-213077 or Becker et al (US 5,275,541) in view of Gyory (US 4,172,696).

JP 10-213077 has a reed valve 5 covering a suction hole 2, but the suction hole 2 is in what is called a check valve unit 4. It is not stated that this check valve unit 4 is a valve plate. Even if the check valve unit 4 were to be a valve plate, then the reed valve 5 is not positioned on a part of the check valve unit 4 which closes a cylinder of a piston and cylinder arrangement. In JP 10-213077, the part 1 is referred to as a casing. Thus the suction pipe 8 simply extends to the environment outside of the casing 1. The suction pipe 8 will thus contain only air from the environment. There will be no damping of the reed valve 5. In order to further distinguish over JP 10-213077, the Applicant has specified in the amended claim 16 that the Applicant's tube contains a column of refrigerant fluid.

JP 10-213077 simply discloses a check valve arrangement for use in a non-illustrated diaphragm-type pump. JP 10-213077 does not disclose nor contemplate the use of damper means for mechanically damping motion of a reed valve.

Figure 1 of Becker et al shows that Becker et al has a construction which is completely different to the Applicant's construction. The Becker et al inlet suction reed valve 25 closes a port 21 in a part 6. The part 6 is not a

valve plate and it appears to be a cylinder head. The Becker et al reed valve 25 is not positioned on the side of the Becker et al part 6 which closes the Becker et al cylinder 12. It is the Becker et al part 4 which closes the cylinder and this part 4 does not have a reed valve for the port 23. If the Examiner regards the Becker et al part 4 as being a valve plate (as stated in the Office Action) then the Becker et al reed 25 is on a side of the valve plate 4 which is the opposite to the Applicant, see the Applicant's claim 16 wherein it is stated that the reed is positioned on a side of the valve plate which closes a cylinder of a piston and cylinder arrangement whereby the reed flexes into the cylinder when the reed opens the port. There is absolutely no question of this happening in the Becker et al construction if the Becker et al part 4 is to be regarded as a valve plate as ^{per} the Examiner.

At page 6 lines 3 – 4 of the Office Action, the Examiner says that in both JP 10-213077 and Becker et al, the reed in the suction valve opens into the cylinder space. This is clearly not the case in Becker et al where the reed 25 extends into an annular compartment 11 which is in a part 4 closing the Becker et al cylinder.

Insofar as the Examiner says that JP 10-213077 and Becker et al are the same as the Applicant's construction except for the provision of a piston and cylinder arrangement as disclosed by Gyory, it is respectfully submitted that this is not correct. As demonstrated above, JP 10-213077 and Becker et

al show constructions which are nothing like the Applicant's construction as claimed in the Applicant's claim 16. In addition, none of JP 10-213077, Becker et al and Gyory is directed towards the Applicant's problem of reed valve dampening. Anybody looking towards solving the Applicant's problem would receive absolutely no assistance whatsoever from any of the three cited patents. It is respectfully submitted that the Examiner is relying on hindsight in knowing the Applicant's problem and the Applicant's solution, and then attempting to show that this is obvious from the constructions of the three cited patents. This is believed to be especially so in the case of Gyory which clearly only contemplates a suction chamber 28 and does not contemplate a tube at all.

With regard to paragraph 9 of the Office Action, the Applicant was obliged to the Examiner for confirming that a cylinder head was mentioned in the disclosure as originally filed. The maintained objection to the suction chamber being associated with the cylinder head and the valve plate has been met by deletion as discussed above.

The new claim 21 is similar to the amended claim 16 but is directed to the compressor itself. In addition, the new claim specifies the advantages of the Applicant's damping. For the Examiner's convenience, the new claim is set out herein below and in brackets we have inserted the part numbers and the place numbers where the wording of the claim can be found in the original

disclosure. The Examiner will thus easily be able to see that subject matter has not been added.

21. A compressor (1) for refrigeration apparatus (page 2 line 22), which compressor (1) comprises a cylinder block (5), a cylinder (4) in the cylinder block (5), a piston (3) in the cylinder (4) and a valve plate assembly (9); the valve plate assembly (9) comprising a valve plate (7) and a reed valve; the reed valve being such that it comprises a reed (11), a port (13) which is opened and closed by the reed (11), and damper means (15) for mechanically damping motion of the reed (11); the damper means (15) comprising a tube (17) which is attached to the valve plate (7), which is in communication with the port (13) on a side of the port (13) remote from the reed (11) so as to enable the passage of refrigerant fluid through the compressor (1), and which is of such a size that, during use of the compressor (1), the tube (17) contains a column of refrigerant fluid which is sufficient to dampen oscillatory backwards and forwards motion of the reed (11) (page 4 lines 6 – 9 and page 4 lines 21 – 23) whereby unnecessary bending stresses of the reed (11) are avoided (page 4 lines 19 – 21), whereby the reed (11) closes the port (13) faster than without the damping (page 4 line 26 – page 5 line 2), and whereby the refrigerant fluid flows into an inlet side (page 3 line 23) of the valve plate (7) with a smoother flow than without the damping and thereby reduces on noise generated by the compressor (1) (page 5 lines 2 – 10).

Accordingly, it is respectfully submitted that this application is in condition for allowance. Early and favorable action is respectfully requested.

If for any reason this **RESPONSE** is found to be **INCOMPLETE**, or if at any time it appears that a **TELEPHONE CONFERENCE** with Counsel would help advance prosecution, please telephone the undersigned or one of his associates, collect in Waltham, Massachusetts, at (781) 890-5678.

Respectfully submitted,

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